

## ABSTRACT

A probe for measuring an electric potential of a cell includes a plate having a surface having a first cavity provided therein, and a sensor element provided in the first cavity. A second cavity is provided in the bottom 5 surface of the first cavity. The first flow passage having first and second openings is provided in the plate. The first and second openings of the first flow passage open to the second cavity and outside the plate, respectively. The sensor element includes a thin plate, and a supporting substrate provided around the thin plate and in the first cavity of the plate. The thin 10 plate has a through-hole therein having a first opening and a second opening communicating with the second cavity of the plate. The first flow passage allows fluid to flow therein. A sucking device is coupled with the second opening of the first flow passage as to suck the fluid flowing in the first flow passage. This probe can measure an electric potential of a cell floating in 15 solution as it is in this environment.